

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) An elevator vibration reducing device comprising:
a vibration sensor for detecting horizontal vibration of a cage;
an actuator for displacing the cage horizontally; and
a control portion including a computing portion for computing a vibration reduction control signal for reducing the horizontal vibration of the cage based on a vibration detection signal generated by the vibration sensor, and controlling the actuator, wherein the control portion includes a detection signal comparing portion for comparing a detection value obtained from the vibration detection signal with a set value, the control portion stopping controlling of the actuator when the detection value becomes not less than the set value, wherein the control portion temporarily stops controlling of the actuator upon detection of an abnormality and counts number of times that an abnormality has been detected, the control portion stopping control of the actuator completely when the number of times counted has attained a set number of times.

Claim 2 (Cancelled).

3. (Previously Presented) An elevator vibration reducing device comprising:
a vibration sensor for detecting horizontal vibration of a cage;
an actuator for displacing the cage horizontally; and
a control portion including a computing portion for computing a vibration reduction control signal for reducing the horizontal vibration of the cage based on a vibration detection signal generated by the vibration sensor, and controlling the actuator; and
a power amplifier between the actuator and the control portion and including an amplifier main body for amplifying the vibration reduction control signal, wherein
the control portion includes current restricting means for restricting current output from the power amplifier to the actuator, and

the power amplifier includes a current comparing portion which stops output of the vibration reduction control signal to the actuator when the current output from the power amplifier to the actuator is not smaller than a set value.

4. (Previously Presented) An elevator vibration reducing device comprising:
a vibration sensor for detecting horizontal vibration of a cage;
an actuator for displacing the cage horizontally; and
a control portion including a computing portion for computing a vibration reduction control signal for reducing the horizontal vibration of the cage based on vibration detection signals generated by the vibration sensor, and controlling the actuator, wherein
the control portion includes a plurality of detection signal comparing portions for comparing detection values obtained from the vibration detection signals with set values, and a branching portion assigning the vibration detection signals within respective frequency bands to respective detection signal comparing portions, and
the set values in the detection signal comparing portions are different from each other according to the respective frequency bands, the control portion stopping controlling of the actuator when the detection values become not larger than the set values.

5. (Previously Presented) The elevator vibration reducing device according to Claim 4, wherein the control portion temporarily stops controlling of the actuator upon detection of an abnormality and counts number of times that an abnormality has been detected, the control portion stopping control of the actuator completely when the number of times counted has attained a set number of times.

6. (Previously Presented) An elevator vibration reducing device comprising:
a plurality of vibration sensors, each vibration sensor detecting vibrations of a cage in a single, identical horizontal direction;
an actuator for displacing the cage horizontally; and
a control portion including a computing portion for computing a vibration reduction control signal for reducing the horizontal vibrations of the cage based on vibration detection signals generated by the vibration sensors, and controlling the actuator, wherein the control portion includes a multiple sensor output comparing portion for detecting a failure of the

vibration sensors by comparing to each other the respective vibration detection signals generated by the vibration sensors, the control portion stopping controlling of the actuator when the vibration sensors are determined to have failed.

7. (Previously Presented) The elevator vibration reducing device according to Claim 6, wherein the control portion temporarily stops controlling of the actuator upon detection of an abnormality and counts number of times that an abnormality has been detected, the control portion stopping control of the actuator completely when the number of times counted has attained a set number of times.

8. (Previously Presented) An elevator vibration reducing device comprising:
a vibration sensor for detecting horizontal vibration of a cage;
an actuator for displacing the cage horizontally;
a control portion including a computing portion for computing a vibration reduction control signal for reducing the horizontal vibration of the cage based on a vibration detection signal generated by the vibration sensor, and controlling the actuator;
an inspecting portion including an inspection signal generating portion for outputting an inspection signal to the control portion to produce a drive signal for driving the actuator when the cage is at rest and producing a vibration detected by the vibration sensor, and
an abnormality judging portion for detecting an abnormality by comparing a vibration, that is produced when the inspection signal is output for driving the actuator and that is detected by the vibration sensor, with an inspection vibration signal obtained by computation directly upon the inspection signal.